



UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON NUCLEAR WASTE
WASHINGTON, DC 20555 - 0001

March 25, 2005

The Honorable Nils J. Diaz
Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

SUBJECT: STATUS OF HIGH-SIGNIFICANCE AGREEMENTS ASSOCIATED WITH THE
PROPOSED HIGH-LEVEL WASTE REPOSITORY AT YUCCA MOUNTAIN

Dear Chairman Diaz:

During the 157th meeting of the Advisory Committee on Nuclear Waste on February 23–25, 2005, the Committee was briefed by the NRC staff on the status of the key technical issue (KTI) agreements associated with the proposed high-level waste repository at Yucca Mountain. A total of 293 KTI agreements had been established to address data and analysis needs pertaining primarily to post-closure repository performance. As a result of these meetings and agreements, DOE committed to provide the information necessary to ensure a quality license application (LA) and efficient LA review by the NRC.

The Committee has been proactive with regard to the issue resolution process and related topics for several years. The Committee was briefed by DOE and NRC representatives during its 121st, 122nd, and 123rd meetings, September 19–21, October 17–19, and November 27–29, 2000, respectively, on progress toward resolution of KTIs (Reference 1). During its 133rd meeting March 19–21, 2002, the NRC staff briefed the Committee on the development of methods for performing sensitivity analyses as part of the total system performance assessment review (Reference 2). During its 143rd meeting June 24–25, 2003, the NRC staff briefed the Committee on ranking agreements by risk significance and using risk information to resolve issues (Reference 3). The ACNW has also reported on other activities for risk-informing the issue resolution process (Reference 4).

At the 157th meeting, the staff informed the Committee that responses have been received from DOE for all 293 agreements, and reviews related to 224 agreements have been completed. Information concerning the remaining 69 agreements is currently under review. These reviews are expected to be completed by April 15, 2005.

According to the staff, most of the agreements, including the agreements currently under review, are of low or medium risk significance. The staff has identified only 41 high-significance agreements and finished reviewing the information on these agreements. Based on these reviews, the staff concluded DOE has fulfilled its obligation to provide information regarding 32 high-significance agreements. Resolution of most of the remaining high-significance agreements is not expected to be problematic as resolution of these agreements is pending DOE's release of information to the public and some model clarifications. The staff, however, has categorized a few high-significance agreements as "difficult issues," (e.g., agreements on volcanism and aircraft hazards).

The Committee offers the following comments and observations:

- o The staff noted that though agreements were “closed” at this pre-license application stage, any issue or topic would be fully evaluated during the review of a license application and that “closing” an agreement does not preclude additional review of an issue or topic after a license application is submitted.
- o The NRC staff’s agreement resolution process has been efficient and risk-informed, and the staff has completed reviews in a timely but deliberate manner.
- o The pre-licensing technical exchanges and reviews have resulted in agreements on many technical issues. Other issues were identified as needing additional attention. The KTI resolution process should improve the quality of a potential DOE LA and the efficiency of the NRC staff’s licensing review.

The Committee recommends that the staff continue using its pre-licensing KTI resolution process. In addition, because the KTI agreements are focused on the post-closure issues and only a small number of pre-closure issues were covered by the agreements, the Committee believes that the staff should also now focus on pre-closure issues. The Committee will proactively interact with the staff on the difficult issues that have been identified by the agreement resolution process, including issues associated with volcanism and aircraft hazards.

Sincerely,

/RA/

Michael T. Ryan
Chairman

References:

1. Letter dated February 8, 2001, from B. John Garrick, Chairman, Advisory Committee on Nuclear Waste, to Richard A. Meserve, Chairman, U.S. Nuclear Regulatory Commission, transmitting ACNW recommendations and concerns pertaining to the NRC high-level radiative waste issue resolution process. The letter is based on briefings by DOE and NRC representatives during the 121st, 122nd, and 123rd meetings of the Advisory Committee on Nuclear Waste September 19–21, October 17–19, and November 27–29, 2000, respectively, on progress toward resolution of the KTIs.
2. Letter dated August 7, 2002, from George M. Hornberger, Chairman, Advisory Committee on Nuclear Waste, to Richard A. Meserve, Chairman, U.S. Nuclear Regulatory Commission, transmitting ACNW recommendations pertaining to parametric sensitivity and uncertainty analysis. The letter is based on briefings by NRC representatives during the 133rd meeting of the Advisory Committee on Nuclear Waste, March 19–21, 2002, on high level waste performance assessment sensitivity studies.

3. Letter dated August 13, 2003, from B. John Garrick, Chairman, Advisory Committee on Nuclear Waste, to Richard A. Meserve, Chairman, U.S. Nuclear Regulatory Commission, transmitting ACNW comments including recommendations on the NRC staff's issue resolution process for risk-informing the sufficiency review of DOE's technical basis documents for the Yucca Mountain site recommendation.
4. Letter dated September 28, 2001, from George M. Hornberger, Chairman, Advisory Committee on Nuclear Waste, to Richard A. Meserve, Chairman, U.S. Nuclear Regulatory Commission, transmitting ACNW comments and recommendations on the NRC staff's issue resolution process for risk-informing the NRC sufficiency review of DOE's technical basis documents for the Yucca Mountain site recommendation.